



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
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**RB DB3225C-19**  
**Job Sheet 194234**



**Part No:** RB DB3225C-19

**Job Qty:** 1 pcs

**Part Name:** Free Wheeling Clutch Drain Tool Hose Assembly



**Part Weight:** 0 lbs

**Status:** New

**Priority:** Medium

**Job Created:** 4/29/19

**Job Tracking No:**

**Due Date:** 5/31/19

**Created By:** Marie Lajeunesse

**Type:** Stock

**Description:**

**Note:** DWG RB DB3225C Rev H IPP Rev. A 19.04.18 New issue DP Verify DD

**Ship Via:**

### Bill of Materials

### Job Routing

| Op No | Operation                   | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off                                                         |
|-------|-----------------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|------------------------------------------------------------------|
|       |                             |       |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier | Lead Time |                                                                  |
| 110   | Small Fab - 1               | 1 pcs | 5/31/19    |          | 0.00      | 0.20    | Small Fab - 1         |           | <b>DAS</b><br><b>71</b><br><b>9-89</b><br><br><i>19-5-13</i>     |
|       |                             |       |            |          |           |         | Small Fab - 2         |           |                                                                  |
|       |                             |       |            |          |           |         | Small Fab - 3         |           |                                                                  |
|       |                             |       |            |          |           |         | Small Fab - 4         |           |                                                                  |
|       |                             |       |            |          |           |         | Small Fab - 5         |           |                                                                  |
|       |                             |       |            |          |           |         | Small Fab - 6         |           |                                                                  |
|       |                             |       |            |          |           |         | Small Fab - 7         |           |                                                                  |
| 120   | QC 5                        | 1 pcs | 5/31/19    |          | 0.00      | 0.00    | QC 5 - 10             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 12             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 17             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 18             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 19             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 22             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 24             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 3              |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 43             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 49             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 51             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 58             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 68             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 9              |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 50             |           |                                                                  |
|       |                             |       |            |          |           |         | QC 5 - 30             |           |                                                                  |
| 130   | Packaging 3-1 - Stock - B4B | 1 pcs | 5/31/19    |          | 0.00      | 0.00    | Packaging 3 - 1 - B4B |           | <b>DAS</b><br><b>40</b><br><b>9-89</b><br><br><b>MAY 13 2019</b> |
|       |                             |       |            |          |           |         | Packaging 3 - 2 - B4B |           |                                                                  |
|       |                             |       |            |          |           |         | Packaging 3 - 3 - B4B |           |                                                                  |
|       |                             |       |            |          |           |         | Packaging 3 - 4 - B4B |           |                                                                  |
|       |                             |       |            |          |           |         | Packaging 3 - 5 - B4B |           |                                                                  |
|       |                             |       |            |          |           |         | Packaging 3 - 6 - B4B |           |                                                                  |
|       |                             |       |            |          |           |         | Packaging 3 - 7 - B4B |           |                                                                  |



**Container No:** S180692



**Part:** RB DB3225C - 19

**Job No:** 194234

**Serial No/Batch:** S180692

**Revision:** H

**Inspector:**

**Exp Date:**

**Instructions:**

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Email: sales@dartaero.com  
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Date: 05/13/19

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|                |       |         |           |  |                        |      |
|----------------|-------|---------|-----------|--|------------------------|------|
|                |       |         |           |  | Packaging 3 - 8 - B4B  |      |
|                |       |         |           |  | Packaging 3 - 9 - B4B  |      |
|                |       |         |           |  | Packaging 3 - 10 - B4B |      |
|                |       |         |           |  | Packaging 3 - 11 - B4B |      |
|                |       |         |           |  | Packaging 3 - 12 - B4B |      |
|                |       |         |           |  | Packaging 3 - 13 - B4B |      |
|                |       |         |           |  | Packaging 3 - 14 - B4B |      |
|                |       |         |           |  | Packaging 3 - 15 - B4B |      |
|                |       |         |           |  | Packaging 3 - 16 - B4B |      |
|                |       |         |           |  | Packaging 3 - 17 - B4B |      |
|                |       |         |           |  | Packaging 3 - 18 - B4B |      |
|                |       |         |           |  | Packaging 3 - 19 - B4B |      |
|                |       |         |           |  | Packaging 3 - 20 - B4B |      |
|                |       |         |           |  | Packaging 3 - 21 - B4B |      |
|                |       |         |           |  | Packaging 3 - 22 - B4B |      |
|                |       |         |           |  | Packaging 3 - 23 - B4B | PC   |
|                |       |         |           |  | Packaging 3 - 24 - B4B |      |
|                |       |         |           |  | Packaging 3 - 25 - B4B |      |
|                |       |         |           |  | Packaging 3 - 26 - B4B |      |
|                |       |         |           |  | Packaging 3 - 27 - B4B |      |
|                |       |         |           |  | Packaging 3 - 28 - B4B |      |
|                |       |         |           |  | Packaging 3 - 29 - B4B |      |
|                |       |         |           |  | Packaging 3 - 30 - B4B |      |
|                |       |         |           |  | Packaging 3 - 31 - B4B |      |
|                |       |         |           |  | Packaging 3 - 32 - B4B |      |
|                |       |         |           |  | Packaging 3 - 33 - B4B |      |
|                |       |         |           |  | Packaging 3 - 34 - B4B |      |
|                |       |         |           |  | Packaging 3 - 35 - B4B |      |
|                |       |         |           |  | Packaging 3 - 36 - B4B |      |
| 140 QC 21 - SA | 1 pcs | 5/31/19 | 0.00 0.00 |  | QC 21 - SA - 21        | DAG  |
|                |       |         |           |  | QC 21 - SA - 70        | 21   |
|                |       |         |           |  | QC 21 - SA - 53        | 9-50 |

MAY 14 2019

GA 076

Part Op 110 - 1-Cut hose to length. 2-Assemble as per drawing note 7 and 8.

Descriptions: 120 - (QC5- Inspect part completeness to step on W/O)

130 - (Identify as per dwg &amp; Stock Location: \_\_\_\_\_)

140 - (QC21- Final Inspection - Work Order Release)

## Job BOM

| Part / Item | Component Name                | Quantity     | Operation         | Container |
|-------------|-------------------------------|--------------|-------------------|-----------|
| 51495K116   | COUPLING 1/2" NCKL PLTD BRASS | 1 Ea (1 ea)  | 110-Small Fab - 1 | 945155    |
| DTSP10001   | Sleeve                        | 1 pcs (1 ea) | 110-Small Fab - 1 | 517104    |
| K010-0608   | Hose Ø1/2 OD x Ø3/8 ID        | 6 ft (6 ea)  | 110-Small Fab - 1 | 5121367   |

S055179

44  
137  
1374

## Job Allocations

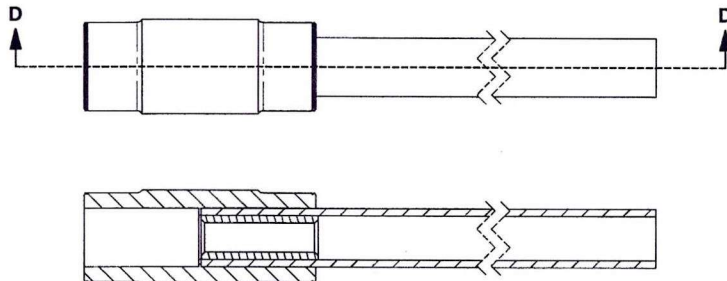
| Operation         | Component Part | Required | Inventory | Allocated |
|-------------------|----------------|----------|-----------|-----------|
| 110-Small Fab - 1 | 51495K116      | 1        | 71        | 0         |
|                   | DTSP10001      | 1        | 46        | 0         |
|                   | K010-0608      | 6        | 527       | 0         |

## Part Specifications

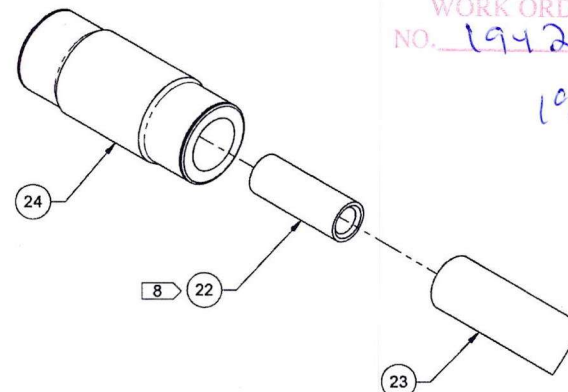
Specifications could not be found.

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| ITEM # | QTY | PART #                       | PART TITLE                                                |
|--------|-----|------------------------------|-----------------------------------------------------------|
| 22     | 1   | DTSP10001                    | SLEEVE                                                    |
| 23     | 1   | Kuri-Tec#K010-0608 OR EQUIV. | CLEAR PVC TUBING 1/2" OD. X 3/8" ID. X 72" LG.            |
| 24     | 1   | McMaster#51495K116 OR EQUIV. | NICKEL-PLATED BRASS PUSH-TO-CONNECT 1/2" OD. TUBE FITTING |



**SECTION D-D**



**RB DB3225C-19 FREE WHEELING CLUTCH DRAIN TOOL HOSE ASSEMBLY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) IDENTIFICATION: N/A
- 7) ASSEMBLE AS SHOWN
- 8) INSTALL ITEM 22 INTO ONE END OF ITEM 23 UNTIL FLUSH

SHOP COPY  
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WITHOUT NOTICE  
WORK ORDER  
NO. 194234 MLC  
19-04-29

|                                                                                                                                                                                                                                                                                 |           |                                        |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------|--------------|
| DESIGN                                                                                                                                                                                                                                                                          | MBB       | <b>DART AEROSPACE LTD</b>              |              |
| DRAWN                                                                                                                                                                                                                                                                           | MBB       | HAWKESBURY, ONTARIO, CANADA            |              |
| CHECKED                                                                                                                                                                                                                                                                         | KPT       | TOOL PART #                            | REV. H       |
| MFG. APPR.                                                                                                                                                                                                                                                                      | DP        | <b>RB DB3225C</b>                      | SHEET 6 OF 6 |
| APPROVED                                                                                                                                                                                                                                                                        | <i>Wp</i> | TITLE                                  | SCALE        |
| DATE                                                                                                                                                                                                                                                                            | 3/1/2019  | <b>FREE WHEELING CLUTCH DRAIN TOOL</b> | NTS          |
| <small>COPYRIGHT © 2019 BY DART AEROSPACE LTD<br/> THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> |           |                                        |              |



Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Sequence #: _____                                                                                                                 | QTY Affected : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | MRB (QSI042)           |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Completed By           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Lead hand / Supervisor |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | QC / QA Coordinator    |  |
| <b>Root Cause</b><br><br><div style="display: flex; flex-direction: column;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Preservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                        |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |